

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

The Examiner is thanked for conducting a telephone interview with Douglas Holtz on September 22, 2006, to discuss the claims, the cited references, in particular the Tufte reference, and possible clarifying amendments to the claims. No specific agreement was reached in the telephone interview.

THE CLAIMS

Independent claims 7 and 12 have been amended to emphasize that the x-axis scale plotting control unit always controls plotting of logarithmic scales for the x-coordinate range such that, when the x-axis is selected to be set as the logarithmic x-axis, the determined number of logarithmic scales for the x-coordinate range are automatically plotted, and such that no visible scales of any kind are plotted for the x-coordinate range when the x-axis is set to be linear and the y-axis is selected to be set as the logarithmic y-axis

In addition, independent claim 7 and 12 have been amended to emphasize that the y-axis scale plotting control unit always controls plotting of logarithmic scales for the y-coordinate range such that, when the y-axis is selected to be set as the logarithmic y-axis, the determined number of logarithmic scales

for the y-coordinate range are automatically plotted, and such that no visible scales of any kind are plotted for the y-coordinate range when the y-axis is set to be linear and the x-axis is selected to be set as the logarithmic x-axis.

Still further, independent claims 7 and 12 have been amended to change "ordinary graphs" to "linear graph" to accord with the Examiner's interpretation of the term "ordinary."

No new matter has been added, and it is respectfully requested that the amendments to claims 7 and 12 be approved and entered, and that the objection to the claims be withdrawn.

THE EXAMINER'S INTERPRETATION OF THE TERM "NO SCALES"

In the previous Office Action issued November 25, 2005, the Examiner rejected claims 7 and 12 as being indefinite for not clearly defining the term "scales" in the phrase "no scales are plotted for the x-coordinate range when the x-axis is not selected to be set as the logarithmic x-axis" (and the corresponding phrases in claims 7 and 12). Nevertheless, for the purposes of examination, in the Office Action issued November 25, 2005, the Examiner interpreted "scales" to mean "logarithmic scales."

In order to clarify the Examiner's understanding and clarify that "no scales" should not be interpreted to mean "no logarithmic scales," as suggested by the Examiner, claims 7

and 12 were amended in the Amendment filed on February 24, 2006, to change the phrase "no scales" to "no visible scales of any kind." That is, independent claims 7 and 12 were amended to clarify that "no scales" was intended to mean "no logarithmic scales and no linear scales," hence the use of the phrase no visible scales of any kind.

However, on page 2 of the current Office Action, the Examiner thanks the applicant for "validating" the Examiner's previously stated interpretation of scales.

It is respectfully pointed out that it was not intended to validate the Examiner's interpretation of "no scales" as "no logarithmic scales," and it is respectfully submitted that the claims do not support the interpretation of "no scales" as "no logarithmic scales." Instead, the claims clearly recite that "no visible scales of any kind" (emphasis added) are plotted on the appropriate axis when the conditions recited in the claims are met.

That is, claims 7 and 12 recite that no visible scales of any kind are plotted for the x-coordinate range when the x-axis is set to be linear and the y-axis is selected to be set as the logarithmic y-axis. Thus, when the x-axis is linear and the y-axis is logarithmic, no logarithmic scales and no linear scales (i.e. no visible scales of any kind) are plotted for the x-coordinate range.

Similarly, claims 7 and 12 recite that no visible scales of any kind are plotted for the y-coordinate range when the y-axis is set to be linear and the x-axis is selected to be set as the logarithmic x-axis. Thus, when the y-axis is linear and the x-axis is logarithmic, no logarithmic scales and no linear scales (i.e. no visible scales of any kind) are plotted for the y-coordinate range.

It is respectfully submitted that prosecution proceed on the basis of the phrase explicitly recited in the claim, that "no visible scales of any kind" means no scales of any kind, whether logarithmic or linear.

THE PRIOR ART REJECTION

Claims 7-12 were rejected under 35 USC 103 as being obvious in view of combinations of "OrCAD PSpice Quick Reference" OrCAD™, Inc. ("OrCAD"), "How to Get Started with PSpice? (for beginners)" by Jan Van der Spiegel ("Spiegel"), "Lab 1 Help," identified by the Examiner as "PSpice lab from school of Electrical Engineering, University of Toronto, from Internet Archive" ("Lab 1 Help"), "The Visual Display of Quantitative Information," by Edward R. Tufte, ("Tufte"), "Brief Spice Tutorial" for Fall 2002 from the University of Utah ("Brief Spice Tutorial") and Official Notice. These rejections, however, are respectfully traversed.

The Examiner acknowledges on page 9 of the Office Action that the references relating to the product PSpice (namely, all of the references noted above except Tufte) do not disclose displaying a graph in which, when one axis is linear and the other is logarithmic, scales are plotted for the logarithmic axis and no visible scales of any kind are plotted for the linear axis.

The Examiner contends however, that the cited references relating to PSpice demonstrate that no scales are shown when "log axis functionality" is not present. The Examiner refers to such evidence being present on page 9 of the Brief Spice Tutorial, specifically at pages 7 and 8 of the Office Action, where the Examiner argues, "[i]f the log setting is not enabled or the button is not pressed, then the graph is linear, which clearly corresponds to the 'no scales' requirement recited [in claims 7 and 12]." It is respectfully pointed out, however, that according to the evidence relating to PSpice provided by the Examiner, linear axes do have scales. See page 9 of the Brief Spice Tutorial provided by the Examiner. In the screenshot image on page 9 of the Brief Spice Tutorial, the x-axis is logarithmic and the y-axis is linear. Nevertheless, both axes are scaled. In particular, the y-axis in the top graph is scaled from -50 to 50, with a horizontal line extending from the y-axis and across the graph at each of -50, -40, -30, -20, -10, 0, 10, 20,

30, 40, and 50. Similarly, in the bottom graph in the screenshot on page 9 of the Brief Spice Tutorial, the y-axis is linear but nevertheless is scaled from -200 to 0, with a horizontal line extending from the y-axis and across the graph at each of -200, -175, -150, -125, -100, -75, -50, -25 and 0. The x-axis in both graphs is logarithmic and is also scaled.

Thus, it is respectfully submitted that page 9 of the Brief Spice Tutorial in fact teaches that whether an axis is scaled linearly or logarithmically, visible scales are plotted.

Accordingly, it is respectfully submitted that the Examiner's assertion that "the graph is linear...corresponds to the 'no scales' requirement" is not supported by the evidence provided by the Examiner.

It is respectfully submitted, moreover, that the Examiner's assertion on this point may be due to the problem of claim interpretation with respect to the term "no scales," which is addressed above. Indeed, on page 9 of the Office Action, the Examiner equates the use of a linear mode with not showing any scales ("no scales (e.g. linear mode only) when the log axis functionality is not present"). It is respectfully submitted that, as properly interpreted, the phrase "no visible scales of any kind" in the claim clearly and explicitly excludes the interpretation that visible linear scales are equivalent to "no visible scales of any kind."

The Examiner acknowledges, that at the least, PSpice "might still show some scale markings." For this reason, the Examiner has cited Tufte to supply the missing teachings of PSpice.

As recognized by the Examiner, Tufte discloses eliminating unnecessary elements of a graph such that a "data-ink ratio" (the ratio of meaningful data-ink to the total ink used in a graphic) is maximized. The Examiner uses the teachings of Tufte to argue that it would be obvious to modify PSpice to achieve the feature of the present invention whereby when one axis is set to be linear and the other is set to be logarithmic then no visible scales of any kind are plotted on the linear axis. It is respectfully submitted, however, that the Examiner's arguments with respect to this feature of the present invention are unsupported by any teachings of Tufte or by any other objective evidence.

Indeed, it is respectfully pointed out that in Tufte's discussion of time-series graphs the graph pointed out by the Examiner on page 43 of Tufte still includes scales on the time axis (even though the time axis is the one pointed to by the Examiner as being easily understood). In addition, it is respectfully pointed out that at the top of page 94 and the top of page 95 thereof, Tufte approvingly discusses graphs that include scales on both axes, whether the graphs have two linear axes (page 95) or two non-linear axes (page 94).

It is respectfully pointed out, moreover, that Tufte does not address graphs in which one axis is linear and the other is logarithmic. The disclosure of Tufte contains no indication that such graphs should be treated differently than the graphs on pages 94 and 95 thereof, which includes scales for both axes, and it is respectfully submitted that the Examiner's reasoning to the contrary is unsupported by the disclosure of Tufte or by any additional objective evidence.

It is respectfully submitted, therefore, that Tufte does not disclose, teach or suggest a rule whereby an x-axis scale plotting control unit always controls plotting of logarithmic scales for the x-coordinate range such that, when the x-axis is selected to be set as the logarithmic x-axis, the determined number of logarithmic scales for the x-coordinate range are automatically plotted, and such that no visible scales of any kind are plotted for the x-coordinate range when the x-axis is set to be linear and the y-axis is selected to be set as the logarithmic y-axis, as recited in amended independent claims 7 and 12. And it is respectfully submitted that Tufte similarly does not disclose, teach or suggest a rule whereby y-axis scale plotting control unit always controlling plotting of logarithmic scales for the y-coordinate range such that, when the y-axis is selected to be set as the logarithmic y-axis, the determined number of logarithmic scales for the y-coordinate range are

automatically plotted, and such that no visible scales of any kind are plotted for the y-coordinate range when the y-axis is set to be linear and the x-axis is selected to be set as the logarithmic x-axis.

Indeed, Tufte even admits that although the data-ink ratio should be maximized, such a rule may be unhelpful in a large number of statistical graphs (as many as one-third, according to Tufte), and that the rule should be applied "within reason," based on the graph at hand. Clearly, therefore, although Tufte discloses that the share of "data-ink" should be maximized, Tufte does contemplate any rule whereby control is always performed to automatically plot logarithmic scales when an axis is selected to be logarithmic, and to plot no visible scales of any kind for a linear axis when the other axis is selected to be logarithmic, in the manner of the claimed present invention.

In view of the foregoing, it is respectfully submitted that the present invention as recited in amended independent claims 7 and 12, as well as claims 8-11 depending from claim 7, clearly patentably distinguishes over all of the cited references, taken singly or in any combination, under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

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